DOCUMENT RESUME

ED 304 259 RC 016 973

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TITLE Toward More Effective Education for Poor, Minority Students in Rural Areas: What the Research Suggests. Education Policy.
INSTITUTION Northwest Regional Educational Lab., Portland, OR. Center for National Origin, Race and Sex Equity.
SPONS AGENCY Department of Education, Washington, DC.
PUB DATE Nov 88
NOTE 32p.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Compensatory Education; *Disadvantaged Youth; *Economically Disadvantaged; Educationally Disadvantaged; Educational Principles; *Educational Strategies; *Minority Group Children; *Nondiscriminatory Education; *Rural Education; Rural Schools

ABSTRACT

This report summarizes recent research about the effective education of poor minority students in rural areas. Significant barriers to high student performance are briefly discussed and research findings about strategies designed to overcome these barriers and to lead to high performance are reviewed. Solutions for educating disadvantaged students should not be flawed by a "remedial and cultural deficit mentality," with low expectations for performance of disadvantaged students. Research suggests a new vision for educating these students incorporating these aspects: (1) high expectations by the family, community, and school; (2) active participation by parents and community; (3) instruction in not only basic skills but in learning-to-learn and thinking skills; (4) cultural sensitivity and relevance in materials and teaching practices; and (5) new teaching and grouping strategies such as mastery learning, cooperative learning, and peer tutoring. The following public policy issues raised by this new vision are presented: (1) the need for new partnerships with business, industry, and labor; (2) new policy perspectives on the relationship between equity and excellence; (3) the nature of accountability expectations of the schools; (4) options for implementing the need strategies; (5) long- versus short-range perspectives on strategies for change; and (6) the need for continuing governmental support as well as mandates. The underlying theme of the report is that effective education of the disadvantaged is a major social and economic issue, not just an educational one. This report contains a 77-item bibliography. (ALL)

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ED304259

THE Northwest Regional Educational Laboratory

EDUCATION POLICY

TOWARD MORE EFFECTIVE EDUCATION FOR POOR, MINORITY STUDENTS IN RURAL AREAS: WHAT THE RESEARCH SUGGESTS

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November 1988

RC016973

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TOWARD MORE EFFECTIVE EDUCATION FOR POOR, MINORITY STUDENTS IN RURAL AREAS: WHAT THE RESEARCH SUGGESTS

EXECUTIVE SUMMARY

This report summarizes recent research evidence regarding effective education of poor, minority students in rural areas. The report was prepared by staff at the Northwest Regional Educational Laboratory with developmental support from the Laboratory's Center on National Origin, Race, and Sex Equity.

After a brief review of some significant barriers to high student performance, the bulk of the report reviews research findings about practices that can overcome these barriers and lead to high performance by poor, minority students. These research findings call for a new vision for effective education of the disadvantaged. Earlier efforts were flawed by a "remedial" and "cultural deficit" mentality with low expectations of disadvantaged students.

The research now suggests that a dramatically different vision is called for, one which is manifested by: (a) high community, family, and school expectations for all students regardless of ethnicity or socioeconomic condition, (b) active community and parent participation and partnerships, (c) skillful instruction in basic skills, learning-to-learn skills and thinking skills, (d) cultural sensitivity and relevance in curriculum materials and teaching practices, and (e) new teaching and grouping strategies such as mastery learning, cooperative learning, and peer tutoring.

The report concludes with a discussion of major public policy issues raised by this new vision. Included in this review are new issues related to: (a) the need for new policy partnerships, (b) new policy perspectives on the relationship between equity and excellence goals, (c) the nature of accountability expectations of the schools, (d) optional policy strategies to help implement new schooling strategies, (e) long- versus short-range perspectives on strategies for change, and (f) the need for continuing policy support as well as policy mandates. Finally, the report suggests that the practices emerging from the research provide a highly important information base which policy makers and practitioners should use to implement the new vision of effective education for the disadvantaged.

The underlying theme of the report is that effective education of the disadvantaged is a major public social and economic issue–not just an educational one.

TABLE OF CONTENTS

EXECUTIVE SUMMARY i

I. INTRODUCTION 1

II. BARRIERS TO HIGH STUDENT PERFORMANCE 2

A. STUDENT FACTORS 2

B. SCHOOL SYSTEM FACTORS 3

III. STRATEGIES FOR EFFECTIVE SOLUTIONS 5

A. THE RESEARCH BASE 5

B. A HISTORY OF DIFFERENT ASSUMPTIONS AND STRATEGIES . 5

C. POINTS OF IMPACT FOR IMPROVED PERFORMANCE 6

D. PARENT AND COMMUNITY INVOLVEMENT 6
1. Parental involvement with schooling and with children 6
2. Enhancing involvement 6
3. Participation in children's learning 7
4. Defining the mission of the schools 7
5. "Empowerment" of parents and communities 7
6. Community members as teachers 7

E. SCHOOL AND DISTRICT STRUCTURES AND PRACTICES . . . 8
1. Direction setting 8
2. Early intervention 8
3. Curriculum and instruction 9
4. Standardized testing 9
5. Monitoring student performance and school improvement efforts 10
6. School climate 10
7. School size 10
8. Staffing practices 11

F. CLASSROOM STRUCTURE AND PRACTICES 11
1. Classroom teaching 11
2. Grouping for instruction 13
3. Classroom testing and assessment 13
4. Classroom climate 13
5. Class size 14

TABLE OF CONTENTS

IV. POLICY ISSUES AND OPTIONS 15

A. THE NEED FOR POLICY INITIATIVES 15

B. INTEGRATING POLICY FOR EQUITY AND EXCELLENCE . . . 15

C. EDUCATIONAL POLICY SUGGESTED BY THE RESEARCH . . 15

D. POLICY ON IMPLEMENTING SOLUTIONS 16

E. POLICY PARTNERSHIPS 16

F. NEW ACCOUNTABILITY POLICY 16

G. LONG-RANGE VERSUS SHORT-RANGE POLICY 16

H. POLICY REQUIRES A RESEARCH BASE 17

I. IMPLEMENTING RESEARCH IN POOR, MINORITY, RURAL AREAS: A SUCCESS STORY 17

J. POLICY AS THE CONTEXT FOR IMPROVEMENT 18

BIBLIOGRAPHY 19

I. INTRODUCTION

The Northwest/Pacific Region's concern with improving the achievement of students from isolated poor families is on the leading edge of a national policy issue.

As we face a future of increasing multicultural diversity and a projected growing population of disadvantaged and poor, this nation is faced with a highly complex set of educational questions. These questions go to the heart of how to improve education of the minority poor. Increasingly, we are beginning to understand that we *must* answer these questions for our social and economic survival. One researcher (Levin, 1987) points out the dimensions of the problem:

> "Educationally disadvantaged pupils account for almost one third of all elementary and secondary students in the U.S. Pupils who are defined as educationally disadvantaged lack the home and community resources to fully benefit from conventional schooling practices and the recent wave of educational reforms. Because of poverty, cultural or linguistic differences, they tend to have low academic achievement and experience high secondary school dropout rates. Such students are especially concentrated among minority groups, immigrants, non-English speaking families, and economically disadvantaged populations."

We know there has historically been a gap between ethnic and language minority and majority achievement in the United States. We know equally well that one's race does not cause low achievement. We also know that chronic poverty creates frighteningly unhealthy conditions for learning--conditions which *do* cause low achievement.

The numbers of Northwest/Pacific students who live in poverty and who are bilingual are increasing. Therefore, the issues of improving poor, minority, rural student performance are playing out in this region in advance of many other states.

It is in this context that we draw on our research knowledge to do three things:

- Briefly review the known factors which function as barriers to high performance among poor, isolated, minority children and youth.
- Review more extensively what we know works in helping disadvantaged youngsters perform at high levels.
- Conclude with some thoughts on policy issues and options which seem to come out of the research findings.

Throughout, we will assess strategies to improve student performance in consideration of the context in which these children live and from which they come to school. Solutions that work for poor, minority, rural children can and are found not in the school alone, but in the interactions among the school, the child, and the home. Therefore, we know we need to draw upon, not ignore, the social, cultural, and economic context of home and community.

II. BARRIERS TO HIGH STUDENT PERFORMANCE *

We know from the research on low achieving "at risk" students that there are features which prevent them from performing at high levels, and which can often lead to failure and dropping out of school.

A. STUDENT FACTORS

First, we know there are *student factors*. For example, students who are not proficient in English run the risk of failure in school. Further, we know that the poor performance of non-English speaking students is not due to lower ability or lower learning skills. Yet research tells us that both limited-English-language proficiency and coming from a home environment that has a non-English language is associated with poor achievement and dropping out. Moreover, this population is increasing nationwide.

We know that when the home culture and school system expectations and values conflict, students are caught in the middle. These cultural differences may manifest themselves in ways as subtle as differing expectations of children's "speaking up" for themselves in front of adults or as profound as the contrast between the language of the home and the school. While some programs specifically address recognized language differences, unrecognized differing cultural, interactional, and behavioral expectations can lead equally directly to misapprehension of teachers and the school by the child and of the child by the school and its staff. The result is very often performance which is, correctly or incorrectly, deemed poor. The ultimate results are too often school failure and dropping out of school.

Like ethnic and linguistic differences, the culture of poverty, with its need to focus on meeting urgent immediate needs, contrasts with the long-term growth and goal orientation of the school. One researcher (Boocock, 1979) has analyzed the "culture" created by poverty and how this affects school performance:

> "Characteristic of the culture of poverty are fatalism, feelings of frustration and alienation from the larger society, a present--rather than future--time orientation, resulting in an inability to plan for the future, and preference for physical over mental activities and gratifications."

We are beginning to build a sharper understanding of two different kinds of families: (a) those families who are simply poor and (b) those families who are dysfunctional (where children simply have little constructive access to their parents). The latter families lack the ability to support the educational growth of their children. Regardless of income level, dysfunctional families certainly create learning barriers. For example, children who are abused (nationally a 20 percent increase in reported cases since 1976) have a variety of learning problems. One researcher (Brassard, 1987) has discovered that maltreated youngsters are 10 to 30 IQ points below other children during early childhood. Researchers have also found that teachers tend to judge maltreated children as less competent and as greater behavioral problems.

We are coming to recognize the strong correlation which exists between parents' alcoholism and drug abuse and children's substance abuse. While we don't have research results which directly tie substance abuse to low achievement, the potential relationship seems obvious to us. As one streetwise teacher observed recently, "If the kids in our class are stoned, they sure as heck aren't learning!" The 1986 Gallup poll of public attitudes toward education reveals that, for the first time, the public viewed drug abuse as the most important problem of education.

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*We will use the term "student performance" rather than "achievement." Student performance includes academic achievement, student attitudes, and aspirations as well as student social behaviors.

We know that substance abuse is higher in the West than it is in any other part of the country other than the Northeast. We know from studies in various states that the problem is increasing in rural areas in the West.

We are learning that the growing phenomenon of single-parent families is contributing to children's learning problems. A recent research report (Milne, et al., 1986) reveals that children growing up in a single-parent family have a 93 percent chance of living in poverty at least one year while growing up. They have a 61 percent chance of being in poverty throughout the first ten years of their lives. By contrast, children in two-parent homes have only a 2 percent chance of being poor continuously during ages 0-10. Moreover, we know that more children living in single-parent families score lower on standardized tests and receive lower grades in school.

We recognize that students who have a high rate of absenteeism are also more likely to fail and drop out of school. This absenteeism may be due to a number of factors including dysfunctional families, migration, or subsistence needs for hunting and fishing. Whatever the cause of the absences, we do know that excessive absenteeism is another predictor of school failure.

Finally, we know that living and learning in social isolation causes problems. Whether from dysfunctional families or simply due to geographic isolation, students who experience these conditions often lack the necessary stimulation and/or motivation to learn and to see the relevance of their school work to the "outside" world. Concern for the performance of low-income students was the highest ranked need in the recent survey conducted in rural districts in our region.

B. SCHOOL SYSTEM FACTORS

Let us now turn our attention to *school system factors* which can set up barriers. For example, we know the problems created by high staff turnover--particularly in rural areas. The NWREL R&D Program for Indian Education has found that schools with high turnover often lack the necessary continuity in their curriculum and instructional programs.

Schools in isolated rural settings also pose particular problems. Small size and isolation often prevent attention to unique needs--particularly among the disadvantaged. Moreover, rural teachers and administrators are prepared by institutions of higher education which may not necessarily consider the rural context in their training.

The problem of ineffective teaching of the disadvantaged has also been well researched. Studies show clear tendencies by many teachers to have different expectations for, and different behavior toward, poor and low-achieving students than for higher achievers. Teachers tend to give the higher achievers more interesting assignments. They give low achievers less time to answer questions and more "low order" drill and practice. They tend to interrupt the low achievers more and have them do less self-evaluation than the higher achievers. Obviously, not all teachers behave this way, but the research has revealed some disturbing trends regarding lowered expectations for low-achieving students.

Inadequate staffing levels also present constraints to developing high performance. Studies of Chapter I programs reveal the need for frequent and ongoing adult/child interaction in the classroom. Schools with inadequate staffing levels prevent opportunities for such interactions and positive reinforcement.

Often the structure of schools can present barriers. Schools that are not structured to provide ongoing professional development for their teachers tend to perform less well than those that do. Testing programs that are not related to the curriculum provide meaningless information. Incorrect procedures for grouping and "tracking" students often prevent students from performing at optimum levels and worse, do damage to their self-esteem.

Finally, we now accept that the lack of strong school/community partnerships inhibits high performance. We recognize, as do researchers across the nation, that the source of low achievement may rest with either the school, the family, with the broader community, or some combination thereof. To attempt to isolate the school from the broader community overlooks this need for a sense of mutual purpose and partnership. As one group of researchers (Pallas, et al., 1987) put it:

> "The results of these three types of deficiencies (school, family, community) may all manifest themselves in the same way on standard measures of academic achievement, but the realization that the sources of the deficiencies may rest with the school, the family, or the community, or all three, will sensitize us as we move to identify the size and location of the educationally disadvantaged population."

We now turn our attention to guidelines which are emerging from the research about effective solutions to some of these very complex problems.

III. STRATEGIES FOR EFFECTIVE SOLUTIONS

A. THE RESEARCH BASE

Over the past 15 years, high quality research studies have dramatically improved our understanding of how to create effective education for disadvantaged students. Time and again, effective practices related to improved student performance have been revealed. As we review these research-based practices, specific qualifications about the information presented need to be made:

- We have been careful to examine and summarize those findings which appear to be most relevant to poor, minority, rural, and isolated educational settings--even though some of the research sites have been urban, not rural areas.
- Most of the research is what the researchers call "correlational"; i.e., certain practices have been found time and again to be "correlated" to high student performance, but we are not able to draw a direct "cause and effect" relationship. For example, we know that in virtually all of the effective schooling studies, the leadership of the principal is highly important. Yet we can't say that the active leadership of the principal *per se* causes better student performance.

In spite of these qualifications, we urge consideration of the powerful guidance emerging from these studies.

B. A HISTORY OF DIFFERENT ASSUMPTIONS AND STRATEGIES

The issue of improving the disproportionately low achievement of poor minority students has undergone several different kinds of analyses in the history of United States education. The early view was that genetic inheritance determined the difference in minority versus majority performance. The solution strategies tried under this theory were narrow remedial approaches, such as "tracking" and ability grouping--in worst cases, even segregation. There was a pervasive low expectation of closing the gap between minority and majority performance.

Then came the theory that "environment" caused poor minority students' learning problems. These theories blamed family problems, poverty, and lack of learning stimulation in the home. The solution strategies tried under this theory focused on having the schools "compensate" for the "deficits" and "cultural deprivation" that poor, minority students faced. Solutions included many of the programs of the "Great Society" (Title I, Head Start and Follow Through, desegregation). While these programs worked well in certain settings, many of them were also hindered by an underlying wave of different--and lower--expectations. Low order remediation and basic skills instruction without attainment of "learning to learn" skills was a major strategy in many of these efforts.

Another theory came along in the early 1970s which held that students failed because the culture of the school was different from, and often in conflict with, the home culture. This theory of multicultural pluralism suggested that the best solution strategies were those that strengthened the students' awareness and understanding of their own culture and history and provided a bridge between the home and the school.

At about the same time that multicultural pluralism theories were being advanced, we began to develop a much better understanding of the effectiveness of certain teaching techniques. Mastery learning is one such technique and involves setting specific objectives, carefully measuring prerequisite skill levels, teaching to the objectives, measuring how well students accomplish the objectives, grouping and reteaching as necessary. Similarly, effective teaching practices discovered out of the teaching effects research (in which teachers held high expectations for all students, offered

direct and structured instruction, etc.) also began to enrich our understanding of the kinds of teaching which makes a difference in students' performance. Most important, many of these studies were conducted in areas with high concentrations of poor, minority students.

Current research on multicultural pluralism and effective schooling practices provides us with the most promising direction. This research also definitively disproves the earlier "genetic inheritance" theories.

An additional key strand that has emerged during the current decade is the essential role of parents in the education of their children and the role of the community in the life of the school. In both urban and rural settings, the school has come to be recognized as a part of the community from which its students are drawn, not an institution that can exist separate from it. Goals, standards, and practices of the school must be consistent with, and developed in partnership with, parents and community members. From a narrow definition of community control, i.e., elected boards of education, we have evolved toward a multifaceted model of community involvement. This school-community cooperation is seen as especially critical in districts whose populations are poor, ethnic minority, and language minority children.

The research findings we will summarize document the direct correlation between these effective practices and the performance of poor, minority children. Further, the research findings paint an optimistic picture of what is truly possible. We will be talking about the "alterable variables"--those things that schools and school people can do to bring about improved performance. These practices can and do overcome the barriers of poverty over which school people have little control.

C. POINTS OF IMPACT FOR IMPROVED PERFORMANCE

The research on improvement of student performance suggests three key points of access when working with poor, minority, rural youth. First, in all schools, and especially in the types of communities discussed here, parent and community involvement is a key component of improvement. Second, a great deal of information about more effective ways to structure schools and school districts is available, much of which applies to the rural school setting. Third, effective strategies for working directly with students in classrooms hold great promise for improving student performance. The sections following highlight research findings in each of these three key areas.

D. PARENT AND COMMUNITY INVOLVEMENT

1. Parental involvement with schooling and with children. In a thorough review of the research, our staff has concluded that three key points stand out. First, the evidence overwhelmingly demonstrates that parental involvement in the school and with children's learning is positively related to achievement, behavior, self-concept, future expectations, attendance, and motivation of their children. Further, the greater the level of involvement, the greater the achievement and performance benefits. Finally, the earlier in a child's educational process the parental involvement begins, the more powerful the positive effects will be.

2. Enhancing involvement. To those who have argued that it is "impossible" to get involvement of poor or minority parents, the research suggests another look. Schools across the country are demonstrating powerful effects of involving very willing poor and minority parents. Some of the most positive examples of parentally-involved schools are in the most poverty-stricken neighborhoods of our cities and most isolated communities of our countryside. They are the result of high priority on parental involvement and respect for parents as first and co-teachers.

There are many effective strategies to foster parent involvement. Among these are "Saturday schools" which children and parents attend together; home visits by school staff, a common component in effective early childhood education programs; providing transportation for parents to attend school affairs; rescheduling events and staff schedules to accommodate parents' work schedules; cooperative ventures such as parent-run child care on-site after school hours; and basic skills and other adult education programs in the schools combined with on-site child care and parent-child cooperative learning components.

3. Participation in children's learning. While there has been little research which ties community involvement in governance with student achievement, there is a growing body of evidence that attests to the power of involving parents in the education of their children. Effective involvement, particularly when it directly involves parents in their children's learning tasks, has a definite correlation with improving children's performance--particularly minority and poor children. For example, a major study in England found that children who read to their parents at home made significantly greater progress than students who did not follow this practice. In fact, the children who read to their parents at home (even to those parents who couldn't speak English) outperformed students who had received small group instruction from a highly qualified instructor.

These findings were particularly true for minority, bilingual, underperforming students and are concurrent with a growing number of studies in the United States. The combination of effective parent involvement with other good practices can have particularly dramatic results for limited-English-speaking students. For example, Jim Cummins (1986) reports on the preschool program in Carpinteria, California, a poor Hispanic community:

> "Students who experienced a preschool program in which (a) their cultural identity was reinforced, (b) there was active collaboration with parents, and (c) meaningful use of language was integrated into every aspect of daily activities were developing high levels of conceptual and linguistic skills in both languages (English and Spanish)."

4. Defining the mission of the schools. Community agreement on desired schooling outcomes is essential for effective schooling to take place, as well as community participation in reviewing progress toward these desired outcomes. Native language retention or literacy programs would be a prime example of a community-driven program. Research on vocational education indicates that schools whose parents are involved in defining the vocational programs are more likely to attract and retain their students, especially poor, minority students (Weber, 1986). Such programs have as a key element parent involvement in career education and in student learning.

5. "Empowerment" of parents and communities. Recent reform movements have devoted much attention to the concept of "empowerment" of communities and parents. Such empowerment theories argue that the greater the involvement of the lay community in governance of schools, the greater the potential for ensuring improvement. While this theory has not been well researched, there are signals that empowerment may create a greater sense of relevance and support for schools. For example, in a study of rural schools in Alaska, Gerald McBeath and colleagues (1983) discovered that schools with greater "localized" community control had the lowest rates of absenteeism and vandalism, indicating a greater degree of community identification with the school. Equally important, community participation in defining the mission of the school can lead to greater accountability for school success on the part of the community and parents.

6. Community members as teachers. Recent literature on parental involvement has emphasized the role of parents and other family elders as children's first teachers. Effective early education programs, including Perry Preschool Head Start, incorporate strong parent involvement and parent education programs.

Additionally, there is evidence that parents and community members have a positive effect in the classroom, for example, when serving as teacher or language aides. In some studies of bilingual classrooms, where community members serve as the bridge between the children's first language and the language of instruction, these community people play key roles not only in translating

language, but in interpreting behavior and facilitating the transition from home modes of interaction to the interactional styles that are accepted at schools (e.g., Watson-Gegeo and Boggs, 1977). These positive, facilitative effects on language arts performance can be found in monolingual classrooms as well, where the English language may be shared, but the style of speaking varies from home to school. Michaels and Cook-Gumperz (1979), reporting on an urban Black primary classroom and Cooley and Ballenger (1982) reporting on a public speaking course for Indian college freshmen, found that members from the students' home cultures were able to intervene with explanations and assistance to teachers who were not able to follow the oral structures their students had brought from their homes.

E. SCHOOL AND DISTRICT STRUCTURES AND PRACTICES

1. Direction setting. As in the private sector, we know high performing schools and school districts have strong leadership in setting directions. These directions focus on student performance and take the form of well-defined mission statements, goals and objectives, and clear standards for student performance. The schools and districts that produce extraordinary student performance keep everyone focused on these targets for improvement.

The real leadership challenge in schools and districts with high concentrations of low income and minority students is to instill the belief that *all* students can learn well. In effective schools for minority and poor youth, there is consistent priority placed on narrowing the gap between minority and majority performance. In districts such as Pittsburgh, Minneapolis, and Portland, Oregon, where this leadership focus has been established, we are seeing significant movements toward "closing the gap."

2. Early Intervention. A very key finding of recent research has been the long-term positive outcomes of early education for poor and minority students. Long-term studies of early childhood education for disadvantaged children indicate that social and economic benefits outweigh the school achievement gains that have too often been the sole focus of our concern. Early childhood education programs yield cost benefits for the society as a whole as well as for the individuals who attend them. One study, for example, documents a $7 public cost savings for every $1 invested in early childhood education (Berrueta-Clement, 1984).

Our staff recently completed an extensive review of the research on the effects of early childhood education on disadvantaged children. Major findings include the following:

- Children from educationally disadvantaged families benefit greatly from early education, as do the handicapped.
- Prekindergartners are more prepared for first grade and do better in the critical primary years, based on teacher assessments.
- Studies show positive impact on achievement in one or more subjects, most lasting through primary grades. Longer term achievement effects are more mixed.
- Special education referrals and grade retentions are significantly reduced among students who participate in early childhood education.
- Prekindergartners are more positive about school and their scholastic ability through early adulthood than are their counterparts.
- Early education results in greater economic self sufficiency, self-esteem, and aspirations as well as reduced delinquent behavior.
- Adult:child ratio is critical and should not exceed 1:16 or 2:20.
- Effective parent involvement is clearly needed.

- Many effective programs build their instruction from a child development perspective and provide health and social services to the children and their families.
- Early childhood education narrows the gap in school readiness between disadvantaged and advantaged youngsters.
- The lower the income of the family, the greater the benefits of early childhood education, academically and socially.

3. Curriculum and instruction. The curriculum the school offers is critically important to improved student performance. In studying schools with high concentrations of poor, minority and underachieving students, researchers have found the following curriculum characteristics related to improved performance, both achievement and retention in school:

- Language-based approach with emphasis on reading, writing, speaking, and listening across all subjects in the curriculum.
- Emphasis on generic learning-to-learn skills as well as on the subject matter content in the curriculum.
- Alignment of the curriculum objectives, instructional materials, and testing program. Such approaches help focus on essential skills to be taught, eliminate underplacing and underpacing, and establish priorities for management and use of instructional time.
- Emphasis on cultural materials consistent with the students' cultural backgrounds and culturally conditioned learning styles. For example, studies of instruction of both Native Hawaiian and Native American students find direct correlation between these factors and improved student achievement. This is particularly key in transition from home to school in the early grades and in the language arts areas.
- Curriculum content that is appropriate to the life expectations and interests of the students. For example, vocational, rather than purely academic curricula have higher rates of student retention in populations of poor students. As with cultural appropriateness, economic appropriateness of curriculum is critical to students' engagement in the school. It further provides motivation for continuing in school. Studies have shown, for example, that among low income students, vocational graduates can expect to have a lifetime wage advantage of 9-11 percent over their academic counterparts.

These curriculum characteristics need to be considered in light of the tremendous influence of textbooks on instruction. Studies indicate that 80-90 percent of the total instruction in our schools is dominated by the content of textbooks. Such studies indicate that the instructional quality of textbooks is seriously lacking. The content may be poorly organized, over-generalized, and neglectful of the cultural contributions of various minority groups. Further, publishers' tests are often misaligned with the content of the texts. This indicates a serious need to examine and augment existing curricula in our schools.

4. Standardized testing. When standardized tests are used on a schoolwide or districtwide basis, the research tells us that high performing schools:

- Coordinate and summarize results of their testing.
- Take care to make assessments regular, routine, and with minimum classroom disruption.

- Check the alignment between the tests and the curriculum and materials, and make improvements where necessary.
- Openly review and use assessment results for setting priorities for improvement of student performance.

5. Monitoring student performance and school improvement efforts. The effective schooling studies have revealed that careful schoolwide monitoring of student performance is a significant characteristic of high performing schools. Monitoring such performance results (in the classroom and schoolwide) and making mid-course corrections, keeps attention focused on the "bottom line" learning goals of the school.

Equally important is regular, careful, and evaluative monitoring of educational improvement efforts by school and district staff. Studies of various educational innovations in the 1970s revealed a serious lack of such monitoring. And where such a lack existed, the innovation failed to last. As in any change movement, in school improvement efforts reinforcement and reflection are necessary to sustain the momentum and keep up enthusiasm and involvement.

6. School climate. The effective schooling research reveals the need for a safe, orderly, schoolwide environment, one in which discipline policy is well known and consistently enforced. As in the classroom climate studies, effective schools have also discovered the importance of students and teachers sharing a view of high performance as a critical element, along with incentives and rewards for such performance. Researchers at the University of Texas found that this type of climate can be created within the first two weeks at the opening of the school year by *teaching* the rules and norms as if they are subject matter (as opposed to "handing out a list of do's and don'ts").

Researchers (Stockard & Mayberry, 1988) who reviewed the studies on school climate paint the following picture of schoolwide characteristics associated with high student performance:

- A supportive environment (safe, orderly, democratic, respectful of individual rights).
- Teachers' warmth and responsiveness to students.
- Staff expecting high achievement from students.
- Students valuing academic excellence and believing that they can achieve it.
- An instructional leader who takes responsibility for students' learning.
- Low achievers positively associated with high ability peers.
- Staff and student agreement on norms supporting high achievement.
- High level of involvement and sense of belonging among students and staff.
- Community involvement and/or identification with school.

7. School size. There is some evidence that suggests smaller schools offer greater potential than larger ones for achieving high student performance. However, school size as an isolated factor is meaningless. Yet there are those who have identified the small school's closeness, individual attention, and group cohesiveness as factors which can influence improved student performance. One team of researchers (Stockard & Mayberry, 1988) reviewed the evidence and stated:

> "Besides giving students greater involvement in school activities, it is possible that smaller schools can more easily develop consensus on curricular and disciplinary policies among teachers and students than large schools can. Such consensus has been found to be related to more cohesive school climates, student attendance, and academic achievement."

8. Staffing practices. Staffing practices include recruitment and selection, retention, and inservice training of qualified staff. While there are no research studies which tie recruitment, selection, and retention practices to student performance, we realize that coping with teacher turnover is a major challenge for schools in rural areas.

Some implications for improving staffing decisions in rural schools may be drawn from a recent study of teacher turnover in reservation schools conducted by our R&D Program on Indian Education. This study discovered that there are some common characteristics of teachers who tend not to stay in reservation schools: they are likely to be relatively young and inexperienced (four or fewer years of teaching); they are likely to be single, and they are likely to be from cities or prefer city life.

Teachers who left these schools identified lack of support for teachers by administrators, low academic standards, lack of professional development, and geographic isolation. The study revealed that in recruiting teachers there are some common "warning signals" of personal or professional characteristics which warrant the attention of a hiring committee for a rural, minority school. Long tenure and success is unlikely if the candidate is: rigid and inflexible; overly concerned with discipline and structure; "full of him/herself," i.e, thinks he or she has all the answers; burned out; heavily oriented to and reliant on commercial textbooks; lacking in self-confidence; a "job hopper" who has made frequent job changes; or negative in his/her reaction to the geographic setting.

Rural schools are not the appropriate place for refuge from the "real world" by escapist individuals, nor are staff with a missionary attitude toward their isolated constituents well placed in the schools. Avoiding teacher candidates with these negative traits and looking for those with solid instructional skills (see below) can be a major factor in turning around student performance in a school.

Once selected, an "induction" program for new teachers should be conducted. This program pairs the new teacher with an experienced one to help the novice get acclimated and work on developing and improving the necessary teaching skills. Finally, a well-planned long-range professional inservice training program is an essential ingredient in any effective school. We will have more to say about this when we discuss policy implications.

F. CLASSROOM STRUCTURE AND PRACTICES

1. Classroom teaching. The research suggests specific teaching practices which lead to high performance of poor, minority students. We know teachers must:

- Hold high expectations for all students regardless of socioeconomic status. These expectations include high achievement of both basic and higher order skills by *all* students.
- Teach to an objective-based, preplanned curriculum.
- Make effective and efficient use of class time through clear directions and instruction, equitable questioning of all students, minimal interruptions for discipline, checking for student understanding and reteaching as necessary, and maintaining a brisk instructional pace.
- Demonstrate personal warmth while demanding high performance.
- Respect and incorporate the students' home cultures into the classroom work.
- Adjust instructional techniques to culturally conditioned learning styles (e.g., use of cooperative learning for students from backgrounds such as Native Hawaiian and Native American).
- Monitor students' work regularly and provide constructive feedback.

- Assure that all levels of thinking are required on the part of all students, integrating types of tasks demanded.
- Maintain a task orientation.
- Relate current learning to past learning.

This list of effective teaching practices may seem "old hat" to many. For years, good teachers have practiced them. But several points need to be made about the list which suggest it is worth revisiting from the point of view of improving education for rural disadvantaged students.

First, our research knowledge now makes these effective practices unarguable. This was not the case ten years ago. We can all recall hearing a few teachers say that if we just let kids "do their own thing" and "explore their own interests" that was all the structure they needed. We now can reject this argument as an indication of bad teaching practice.

Second, there are some features in the preceding list which do not often get attention in generalized lists of effective teaching behaviors. For example, the notion of skillful combining of basic skills instruction with the teaching of higher order thinking skills is a particular requirement of effective teaching of disadvantaged students that is often unmentioned--and even debated by some. Yet researchers have documented that disadvantaged students particularly have often suffered from, and been bored by, endless repetition of low order drill and practice in the basic skills. This poor practice derives from failure of teachers to hold equally high expectations for such students. Similarly, decoding skills in reading to the exclusion of helping kids with ways to improve comprehension and simple arithmetic operations to the exclusion of experiences in math problem solving all have the effect of creating meaningless experiences. These in turn negate disadvantaged children's views of school and themselves. Researchers are now documenting the effectiveness of teaching higher order skills to disadvantaged and underachieving students. Increasingly, we are realizing that the often well intentioned approaches to basic skills remediation have been misguided. Beyond the basic skills, the disadvantaged need learning-to-learn skills, content thinking skills, basic reasoning skills, and communication skills.

Third, this list of effective teaching practices makes reference to ensuring cultural relevance. A growing body of research knowledge now documents the fact that the extent to which this happens in the classroom is one major predictor of academic success on the part of minorities and students with limited English speaking abilities. As one research team (Garcia & Noble, 1988) puts it: "Students are more likely to feel that what they do is significant when their personal and family characteristics, their ethnicity, language, and way of life are respected by the school." Increasingly, this sense of "efficacy" on the part of the students is linked in teaching research to high achievement.

Of particular importance in classrooms with minority students is the finding that how children interact is very much structured by the conversation rules and modes of parent-child communication. For example, direct questioning of Native American children often evokes silence. Such silence does not necessarily mean that the child does not understand or know the answer. Rather, the home culture regards active demonstration of knowledge as unseemly. The same is true when a teacher wants the student to debate a proposition. Many tribes favor a less direct and nonpersuasive way of expressing dissent. Thus, minority students often must tread a confusing line of trying to understand the teacher's expectations and ways that the teacher assesses the child's performance, and to resolve the differences between home and teacher expectations.

Finally, the list contains some affective items, too often overlooked in summaries of effective teaching techniques. Yet, in the bicultural classroom, the quality and sincerity of the interaction between teacher and students is a key element in engaging and encouraging, rather than alienating and discouraging, the students. The concept of "warmth" of the teacher is one which is seldom found in general lists of effective teaching practices. Researchers have discovered that this trait of personal warmth is particularly important in working with Native American students. It is most effectively combined with consistent high expectations, yielding what one researcher (Kleinfeld, 1972) calls "active demandingness."

2. Grouping for instruction. Research tells us that the way students are grouped can often have a major effect on student performance. Among key findings on grouping:

- Both high- and low-ability students do better academically in classes where the total group includes students with a wide range of academic ability. The impact is most positive for low-ability students.
- By contrast, only high-ability students benefit from homogeneous "ability" grouping where students at a similar ability level are kept together for long periods of time. In addition, there are harmful effects for low-ability students. Their engagement decreases when they are kept together for long periods of time.

Two grouping practices that are showing particularly significant performance results are "peer tutoring" and "cooperative learning" strategies. In peer tutoring, students are paired in a one-on-one relationship to reteach one another, to extend instruction, or to assist each other with tasks emerging from the instruction. In cooperative learning, small groups of four to six students with a cross-section of characteristics are formed to teach information and skills. The tasks they work on emphasize material already taught by teachers. Students assist one another with the task. Then each group receives a single grade for its performance, as well as an individual assessment of each student's contribution to the group.

In peer tutoring and cooperative learning, the individual student is judged in part by his/her contribution to the total team effort. Study after study has documented both improved achievement and improved classroom climate related to these strategies. One researcher (Levin, 1987) cites the peer tutoring approach, properly carried out, as one of the most cost-effective ways for improving the performance of disadvantaged students. Further, such cooperative student-on-student and team-structured groupings take advantage of many minority students' cultural backgrounds. Where "performance" by an individual may be construed as showing off or self-aggrandizement, group work supports striving for excellence.

3. Classroom testing and assessment. The decade of the 1980s has seen great public interest in testing students. While the reform movement of the early 1980s led to heightened schoolwide achievement testing of students across the country, researchers at the Laboratory (Stiggins, Conklin, & Bridgeford, 1986) focused a great deal of attention on the kind of testing that happens in the classroom. They found teachers assess students' behavioral and interactional styles almost as much as they assess academic performance. For example, some research found that teachers tend to use cues such as the ways children sit, talk, listen, and respond to instructions to develop a framework for assessing students. For minority students, whose interactional expectations differ from those of the teacher, these assessments can be especially inappropriate or unfair.

Our researchers advocate expanded training of teachers to assess students appropriately and to be sensitive to the different styles of interaction conditioned by their home environments. As students are assessed much more often by their teachers in the classroom than they are by standardized tests, these research findings are particularly important for improving student performance.

4. Classroom climate. The climate of the classroom has an important relationship to student learning. Researchers have documented that a "safe and orderly" environment is a key feature of effective classrooms. We have already cited the necessity for the classroom to contain an atmosphere that respects the students' cultural backgrounds and heritage. Also important is a classroom environment where the students as well as the teacher respect and demonstrate "high academic expectations, warmth, concern for others, and respect of others." These features have been shown to enhance student achievement, particularly in classrooms with significant numbers of minorities and disadvantaged students.

5. Class size. The issue of class size has been debated for years. It continues to be a major topic in collective bargaining discussions as well as in state legislatures and state education departments. Researchers have reached general consensus on the following statements about class size:

- Reducing class size will not, by itself, raise student achievement. High quality teaching that takes advantage of the smaller group of students must accompany such reductions.
- The most beneficial effects of smaller classes are noted in the area of reading followed, in descending order, by mathematics, language arts, and the natural sciences.
- Ethnic minority students and economically disadvantaged students have higher achievement in smaller classes with high quality teaching than in similar classes of larger size.
- Students of lesser ability benefit relatively more from smaller classes.
- Smaller classes are related to higher achievement in the primary grades of kindergarten through grade three but less related in grades four through eight. The most beneficial effects at all grade levels are noted when the class size is 16 to 22.

IV. POLICY ISSUES AND OPTIONS

A. THE NEED FOR POLICY INITIATIVES

The research findings discussed in the preceding raise several key public policy issues. The "rising underclass" demands heightened attention to effective education for poor, minority students. As we know from national projections, without some form of intervention the number of poor, minority, low-skilled citizens is expected to increase dramatically in the foreseeable future. We know that the consequences are getting worse faster than in any other era of our history. Henry Levin (1987) has detailed the consequences of avoiding the issue of better education for the disadvantaged. Economic deterioration, rising costs of welfare and other public services, and the creation of a "dual society" are all clearly on the horizon unless public policy sets a different direction.

These consequences will have major effects on the economic and social climate. And, equally important, the lack of action will have a major influence on our higher education systems. We are already feeling the impact of declining enrollments of poor, minority citizens in higher education.

B. INTEGRATING POLICY FOR EQUITY AND EXCELLENCE

We have historically viewed the issues of "equity" and "excellence" as two separate sets of concerns. We have tended to assume that if you enhance one, the other must, of necessity, suffer. We now know that the assumption of "tradeoffs" between the two goals is unnecessary and counterproductive. The research on culturally sensitive curriculum and instruction shows us that the "remedial" mentality of "dumbing down" and slowing the pace of instruction is a fruitless way to achieve either equity or excellence. Conversely, sensitive adjustment of curriculum and instruction to cultural conditions, while maintaining the same high expectations for all children, is truly possible. The vision public policy makers can now create is one of hope and belief--the belief that all children, regardless of ethnicity or socioeconomic status, can learn well.

C. EDUCATIONAL POLICY SUGGESTED BY THE RESEARCH

Three major features of the research findings require the attention of those at the local level who must implement improved educational strategies. First, the skillful combination of basic and higher order thinking and learning skills is a major new focus. Second, the need for cultural relevance in curriculum materials and teaching techniques is now well documented. But more than the need, we now have evidence which correlates such relevance with improved student performance for minority and bilingual students. Finally, the requirements that teachers and administrators be highly skilled in planning and initiating new instructional strategies such as cooperative learning, peer tutoring, and mastery learning is coupled with the need for warmth, sensitivity, and commitment to the needs of parents as full partners in the education of children.

Obviously, most of this must happen at the local level. State policy makers are therefore left wondering what their role might be to stimulate this new vision of education and the related solutions. The need for a major initiative in professional development to learn more about these solutions and to gain skills and perspectives in implementing them is probably the single most important support policy makers can give.

D. POLICY ON IMPLEMENTING SOLUTIONS

Another key state policy question centers on the best strategy for creating a new vision and stimulating implementation of the solutions we have discussed. Should the state adopt an "incentive" strategy, rewarding school districts that demonstrate major gains? Should the state provide developmental support to all school districts to improve education of the disadvantaged? Should the state adopt curriculum standards, requiring a common core of learning outcomes for all students? Or should the state adopt a requirement that all districts implement a planning and evaluation process which involves the community in specifying the local outcomes, reviews research findings, implements solutions, and measures and reports how well those outcomes are achieved? There is no research evidence suggesting a preferred policy position on these options. Clearly, however, state policy makers must resolve which of the options should be implemented. We do know from the research on change and improvement in schools that policy makers must orchestrate a constant balance of "pressure" and "support."

E. POLICY PARTNERSHIPS

In setting new directions to reverse the trend of the rising underclass, public policy makers need partnership support from business, industry, and labor as well.as a renewed sense of purpose from the educational community. We need to begin detailing the necessary commitments and roles of other health and welfare agencies in dealing with dysfunctional families, drug and alcohol abuse, and the debilitating effects of poverty.

New kinds of partnerships and commitments are clearly called for. In the case of drug and alcohol abuse, for example, we know that schools cannot overcome a community context that is either ambivalent about drugs or alcohol abuse or worse yet, promotes it. Only effective community partnerships can reverse these trends.

F. ACCOUNTABILITY POLICY

As state and local policy makers seek to create a new vision and provide the necessary support to make it a reality, we are shifting our assumptions about the nature and contributions of schooling in our society. For the last few generations, we have held the view that the schools' basic responsibilities were to provide opportunities. We now see the possibility of schools as "obligation centers." The "opportunity" view says, "Judge our schools on the range and scope of the opportunities we provide." The "obligation" vision says, "Judge the schools on how well they deliver on student performance for *all* students."

As we move to this new level of expectation for our schools, a key public policy question is, "How far should the public expectations of the schools' performance obligation go? To high test scores and positive social behavior? To successful graduation of all students? To possession of job skills?" This question of accountability is a major issue for policy makers to resolve.

G. LONG-RANGE VERSUS SHORT-RANGE POLICY

Another major policy question is, "How long are you willing to wait for major benefits?" Some states are beginning to make major investments in early childhood education. We know that, properly implemented, this is a highly cost-effective strategy, but the benefits will not be fully felt for almost two decades. Other states are choosing to seek quicker, but perhaps more narrow, benefits through dropout prevention programs at the junior and senior high school levels. This latter approach, properly implemented, can have major and more immediate benefits, but may well neglect the next generation of students. Resolving this issue is a major public policy challenge.

H. POLICY REQUIRES A RESEARCH BASE

The "effective schooling" research knowledge base is beginning to demonstrate a significant influence on state and local educational policy. Investment in such research is critically needed to inform policy. Continued support with particular emphasis on research on the education of poor, minority students is critically needed. In particular, research efforts which focus on success characteristics rather than deficits can provide important policy guidance.

I. IMPLEMENTING RESEARCH IN POOR, MINORITY, RURAL AREAS: A SUCCESS STORY

Several years ago, the Laboratory's R&D Program for Indian Education launched an effort to help schools with high concentrations of Indian children in the Northwest. The basic approach was to provide the evidence about general effective schooling to local planning groups. There were many, Indian and non-Indian alike, who said that the effective schooling research findings would never work due to cultural conflict. However, after several years of experience in culturally sensitive application of the effective schooling research we can now quote the following illustrative success stories reported by the school people who have implemented the effective schooling practices:

> "We raised composite SRA scores for Native American students (so that) combined scores of Native students are 50 percent or better in each grade for grades one through four."
>
> "We reduced incomplete student assignments by 61 percent. We have a workable process for achieving school improvement now."
>
> "Last year we had 15 Native American students being considered for retention. This year we have 5. That's significant!"
>
> "We went from a homework completion rate of only 53 percent to an 88 percent completion rate."
>
> "Our PTA meetings had three people showing up in September. At our last meeting for parents of Native American students, we had 60 people attend."
>
> "Our volunteer program for parents includes 20 percent Native parents (up from 0 percent last year). For the first time we have a Native as a PTA officer."
>
> "We increased our attendance to the best in the district (94 percent)."
>
> "Our post test results showed ... that Native American responses in classroom discussions increased to 22 percent of the total students. The Native population is only 18 percent. An interesting side benefit was that the total number of responses in the same period of time increased 60 percent. All students were responding more!"

These kinds of comments suggest to us that the research findings have direct relevance for minorities. Strong state support for implementing these new solutions in rural settings will be critical.

J. POLICY AS THE CONTEXT FOR IMPROVEMENT

Almost equally important, policy makers' commitment to, and patience with, a long-range educational improvement effort is absolutely essential. Our schools are one of the most complex, yet stable of our social institutions. Creating change and improvement therefore demands a long-range viewpoint and long-range strategies. The "quick fix" is not an option. Lasting solutions suggested by a growing body of research evidence are available for us to use.

This is the most important public policy issue of the next decade.

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- Developing and disseminating effective educational products and procedures
- Conducting research on educational needs and problems
- Providing technical assistance in educational problem solving
- Evaluating effectiveness of educational programs and projects
- Providing training in educational planning, management, evaluation and instruction
- Serving as an information resource on effective educational programs and processes including networking among educational agencies, institutions and individuals in the region

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